AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A method of identifying a polypeptide, said method comprising:

(a) ~~adhering~~ providing one or more first arrays comprising one or more polypeptides from a first complex biological sample ~~from a first type of individual~~ adhered to a support ~~to create an array~~;

(b) providing one or more second arrays comprising one or more polypeptides from a second complex biological sample ~~from a second type of individual~~ adhered to a support ~~to create an array~~;

(c) exposing a peptide-nucleic acid coupled library ~~at least one time~~ to ~~an~~ one of said first arrays at least one time ~~array formed by step (a)~~ to create a first product comprising one or more species of said library that either (i) bind to said first array or (ii) do not bind to said first array; ~~and~~

(d) exposing said first product ~~at least one time~~ to ~~an~~ one of said second arrays at least one time ~~array formed by step (b)~~ to create a second product comprising one or more species of said first product that either (i) bind to said second array or (ii) do not bind to said second array;

(e) exposing said peptide-nucleic acid coupled library to one of said second arrays at least one time to create a third product comprising one or more species of said library that either (i) bind to said second array or (ii) do not bind to said second array; and

(f) exposing said third product to one of said first arrays at least one time to create a fourth product comprising one or more species of said third product that either (i) bind to said first array or (ii) do not bind to said first array,

wherein the presence or absence of a species in said second or fourth product is indicative of the identity of a polypeptide that is present in said first and second complex biological samples, absent in said first and second complex biological samples, or not

present in the same amount in said first complex biological sample compared to said second complex biological sample.

2. (Canceled)

3. (Currently Amended) The method of claim ~~2~~ 1, further comprising the step of:

(g) comparing said second product and said fourth product.

4. (Currently Amended) The method of claim ~~2~~ 1, further comprising the steps of:

(g) combining said second and fourth products to produce a pooled product; and

(h) amplifying said pooled product.

5. (Currently Amended) The method of claim 4, further comprising the steps of:

(i) providing one or more third arrays comprising one or more species from said amplified pooled product ~~adhering a portion of said amplified pooled product~~ adhered to a support ~~to provide an array~~; and

(j) exposing ~~a~~ said first or second complex biological sample ~~from said first or second type of individual at least one time~~ to one of said third arrays at least one time ~~array formed by step (i)~~ to provide a fifth product comprising one or more polypeptides from said first or second complex biological sample that either (i) bind to said third array or (ii) do not bind to said third array.

6. (Currently Amended) The method of claim 5, further comprising the step of:

(k) exposing ~~a~~ said first or second complex biological sample ~~from said first or second type of individual at least one time~~ to one of said third arrays at least one time ~~an array formed by step (i)~~ to provide a sixth product comprising one or more polypeptides from said first or second complex biological sample that either (i) bind to said third array or (ii) do not bind to said third array, wherein said complex biological sample ~~is from a type of individual which~~ is different from that used in step (j).

7. (Original) The method of claim 6, further comprising the step of:

(l) comparing said fifth product and said sixth product.

8. (Currently Amended) The method of claim 1, wherein said first or second complex biological sample is from a tissue.

9. (Original) The method of claim 8, wherein said tissue is selected from the group consisting of epithelial, connective, muscle, and nerve.

10. (Currently Amended) The method of claim 1, wherein said first or second complex biological sample is from a body fluid.

11. (Original) The method of claim 10, wherein said body fluid is selected from the group consisting of cerebrospinal fluid, blood, saliva, mucous, tears, pancreatic juice, seminal fluid, sweat, milk, bile, plasma, serum, lymph, urine, pleural effusions, bronchial lavage, ascities, and synovial fluid.

12. (Original) The method of claim 11, wherein said body fluid is cerebrospinal fluid.

13. (Currently Amended) The method of claim 1, wherein said first or second complex biological sample is from an organ ~~type~~.

14. (Currently Amended) The method of claim 13, wherein said organ ~~type~~ is selected from the group consisting of skin, bone, cartilage, tendon, ligament, skeletal muscle, smooth muscle, heart, blood, blood vessel, brain, spinal cord, peripheral nerve, nose, trachea, lung, mouth, esophagus, stomach, intestine, kidney, uterus, ureters, urethra, bladder, hypothalamus, pituitary, thyroid, pancreas, adrenal gland, ovary, oviduct, vagina, mammary gland, testicle, seminal vesicle, penis, lymph, lymph node, lymph vessel, white blood cell, T-cell and B-cell.

15. (Currently Amended) The method of claim 1, wherein said first or second complex biological sample is from a cultured cell ~~type~~.

16. (Currently Amended) The method of claim 15, wherein said cell ~~type~~ is derived from epithelial, connective, muscle or nervous tissue.

17. (Original) The method of claim 1, wherein one of the complex biological samples is from a diseased individual and the other complex biological sample is from a non-diseased individual.

18. (Original) The method of claim 1, wherein one of the complex biological samples is from a medicated individual and the other complex biological sample is from a non-medicated individual.

19. (Original) The method of claim 1, wherein said library is a phage display library.

20. (Original) The method of claim 19, wherein said library is an antibody library.

21. (Original) The method of claim 19, wherein said library is a recombinant display library.

22. (Original) The method of claim 19, wherein said library is a synthetic peptide library.

23. (Currently Amended) The method of claim 1, wherein said first product comprises ~~material~~ one or more species of said library that bound to the first array during the exposing step (c) and was subsequently released.

24. (Currently Amended) The method of claim 1, wherein said second product comprises one or more species of said first product ~~material~~ that did not bind to the second array during the exposing step (d).

25. (Currently Amended) The method of claim 1 ~~2~~, wherein said third product comprises one or more species of said library ~~material~~ that bound to the second array during the exposing step (e) and was subsequently released.

26. (Currently Amended) The method of claim 1 ~~2~~, wherein said fourth product comprises one or more species of said third product ~~material~~ that did not bind to the first array during the exposing step (f).

27. (Currently Amended) The method of claim 1, further comprising treating the first or second complex biological sample ~~of step (a) or step (b)~~ prior to ~~said~~ adhering said one or more polypeptides to said support.

28. (Currently Amended) The method of claim 27, wherein said treating comprises denaturing said one or more polypeptides.

29. (Original) The method of claim 1, wherein the support of step (a) or step (b) is a solid support.

30. (Original) The method of claim 1, wherein both the support of step (a) and the support of step (b) are solid supports.

31. (Currently Amended) The method of claim 1, wherein said one or more polypetides from said first or second complex biological samples are ~~array of step (a) or step (b) is created by crosslinking~~ crosslinked to said support ~~to said complex biological sample~~.

32. (Currently Amended) The method of claim 1, wherein said one or more polypetides from said first and second complex biological samples are ~~both the array of step (a) and the array of step (b) are created by crosslinking~~ crosslinked to said support ~~to said complex biological sample~~.

33. (Currently Amended) The method of claim 5, wherein said fifth product comprises one or more polypeptides from said first or second complex biological sample ~~material~~ that bound to the third array during the exposing step (j) and was subsequently released.

34. (Currently Amended) The method of claim 6, wherein said sixth product comprises one or more polypeptides from said first or second complex biological sample

~~material~~ that bound to the third array during the exposing step (k) and was subsequently released.

35. (Original) The method of claim 1, further comprising the step of amplifying said second product.

36. (Currently Amended) The method of claim 1 ~~2~~, further comprising the step of amplifying said fourth product.

37. (Original) The method of claim 1, further comprising analyzing said second product via mass spectrometry.

38. (Currently Amended) The method of claim 1 ~~2~~, further comprising analyzing said fourth product via mass spectrometry.

39. (Original) The method of claim 5, further comprising analyzing said fifth product via mass spectrometry.

40. (Original) The method of claim 6, further comprising analyzing said sixth product via mass spectrometry.

41. (Original) The method of claim 7, wherein said fifth and sixth products are compared using mass spectrometry.

42. (Currently Amended) The method of claim 1, wherein said library is exposed to the first array ~~formed by step (a)~~ more than one time to create said first product.

43. (Currently Amended) The method of claim 1, wherein said first product is exposed to the second array ~~formed by step (b)~~ more than one time to create said second product.

44. (Currently Amended) The method of claim 1 ~~2~~, wherein said library is exposed to the second array ~~formed by step (b)~~ more than one time to create said third product.

45. (Currently Amended) The method of claim 1 ~~2~~, wherein said third product is exposed to the first array ~~formed by step (a)~~ more than one time to create said fourth product.

46. (Currently Amended) The method of claim 5, wherein the first or second complex biological sample of step (j) is exposed to the third array ~~formed by step (i)~~ more than one time to create said fifth product.

47. (Currently Amended) The method of claim 6, wherein the first or second complex biological sample of step (k) is exposed to the third array ~~formed by step (i)~~ more than one time to create said sixth product.

48. (Currently Amended) The method of claim 1 ~~2~~, wherein the first arrays ~~array~~ of step (c) and step (f) are the same array.

49. (Currently Amended) The method of claim 1 ~~2~~, wherein the first arrays ~~array~~ of step (c) and step (f) are separate arrays.

50. (Currently Amended) The method of claim 1 ~~2~~, wherein the second arrays ~~array~~ of step (d) and step (e) are the same array.

51. (Currently Amended) The method of claim 1 ~~2~~, wherein the second arrays ~~array~~ of step (d) and step (e) are separate arrays.

52. (Currently Amended) The method of claim 6, wherein the third arrays ~~array~~ of step (j) and step (k) are the same array.

53. (Currently Amended) The method of claim 6, wherein the third arrays ~~array~~ of step (j) and step (k) are different arrays.

54. (New) The method of claim 1, wherein said first and second complex biological samples are from different subjects.